

Helios™

ToF
TIME OF FLIGHT

A Compact Time of Flight (ToF) Camera with Superior Depth Precision



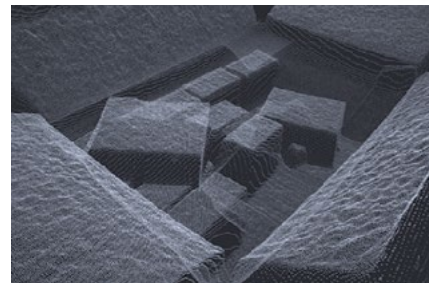
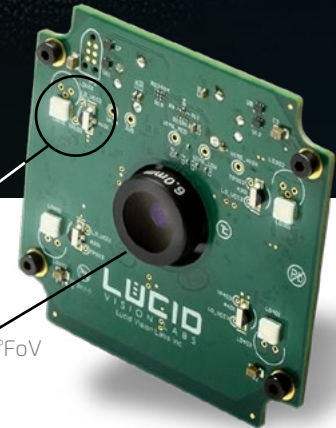
- Sony DepthSense IMX556 CMOS
- Accuracy <5mm (0.3m to 1.5m)
- Precision of 2mm at 1.0m distance
- 640 x 480 at 30 fps

GIG
VISION

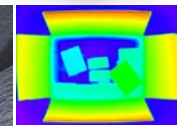
GEN<i>i</i>CAM

4 x VCSEL Laser Diodes @850 nm

Sony DepthSense IMX556 with 6.0mm lens, 59° x 45°FoV



3D Point Cloud



3D Depth Map



Original Scene

Helios ToF Camera Models

Model	MP	Resolution	FPS	Sensor	Format	Pixel Size	Lens Mount	Chroma	GigE Interface	Power Supply
HLS003S-001	0.3 MP	640 x 480 px	30 fps	Sony DepthSense IMX556 CMOS	1/2"	10 μm	Integrated 6mm focal length lens	Mono	M12	none
HLS-BUN-US1	0.3 MP	640 x 480 px	30 fps	Sony DepthSense IMX556 CMOS	1/2"	10 μm	Integrated 6mm focal length lens	Mono	M12	NA included
HLS-BUN-EU1	0.3 MP	640 x 480 px	30 fps	Sony DepthSense IMX556 CMOS	1/2"	10 μm	Integrated 6mm focal length lens	Mono	M12	EU included

Helios ToF Embedded Module : Preliminary Specifications**

Model	MP	Resolution	FPS	Sensor	Format	Pixel Size	Lens Mount	Output	Interface
Helios ToF Embedded	0.3 MP	640 x 480 px	30 fps	Sony DepthSense IMX556 CMOS	1/2"	10 μm	Integrated S-Mount	3D Point Cloud, Intensity and Confidence	MIPI (FFC)

**For more Helios Embedded specs please see our [Preliminary Datasheet](#)



Sony DepthSense for NVIDIA® JETSON™ TX2

Specifications

Interface, Power, and Size Information		Imaging Properties	
Digital Interface	1000BASE-T GigE, M12 X-coded	Working Ranges	Near mode: up to 1.5m Far mode: up to 6m
GPIO Interface	8 pin M8 connector	Accuracy	Less than 5mm (0.3m to 1.5m)
Opto-Isolated I/O Ports	1 input, 1 output	Precision	Standard deviation less than 2mm at 1m
Non-Isolated I/O Ports	2 bi-directional	Lens Field of View	59° x 45° (nominal)
Dimensions	55 x 55 x 77.7 mm	Illumination	4 x VCSEL laser diodes @ 850nm
Lens Mount	Integrated lens with 6mm focal length (not user changeable)	Camera Features	
Weight	254 g	User Sets	1 default and 2 custom
Power Requirement	18-24 V through GPIO	Exposure Control	Manual
Power Consumption	< 15W	Output Formats	3D Point Cloud, Intensity and Confidence
Standard and Certifications		OS Support	Windows and Linux
Standard	GigE Vision v2.0, GenICam 3D	Software Support	Arena SDK, C++, C, C#, Python
Compliance	CE, FCC, RoHS, REACH, WEEE, Eye Safety Class 1 IEC/EN 60825-1:2014		
Operating Temperature	-10 to 60°C		

Helios ToF Camera Drawings

